Acmaeodera Esch.

This genus contains a number of species little represented in collections. Many of these seem confined to the chaparral forests of the arid and semiarid regions of the southwest. All appear to transform in the fall and to remain in the pupal cells in the wood until spring. The various species usually can be taken in fair numbers during the winter months from the oaks (*Quercus*), wild lilacs (*Ceanothus*), mountain mahogany (*Cercocarpus*), chemise (*Adenostema*), cascara (*Rhamnus*) and similar shrubs which go to make up the brush forests. Patience and a good sharp hatchet will produce many fine specimens for the collection.

Collecting from the wood is not so easy as beating and not so much territory can be covered, but the results are surer. If the first tree does not produce results, try, try again, not only another tree but another locality and success is assured as skill develops. The most important point in this method of collecting is that once the host of a species is determined the usually desired additional specimens can be obtained with much more certainty when wanted. Also, along with the specimens, one obtains many fine observations on the life histories.

Very often much time can be saved by searching out the trees which show emergence holes instead of chopping into every scar. Most of the woodborers live for several years in the wood and usually all of the beetles of the same brood do not emerge the same year.

VIERECK'S FAMILY LABENIDAE WITH THE DESCRIPTION OF A NEW SPECIES OF APECHONEURA (HYM., ICHNEUMONIDAE.)

By R. A. Cushman, *Bureau of Entomology.*

In a paper published in the January number of the current (1920) volume of Entomological News, H. L. Viereck erects the new Ichneumonid family Labenidae, based on the single character of the high insertion of the abdomen on the propodeum. In this family he includes the genera *Labena* Cresson and *Psiloparia* (new genus) and "possibly *Apechoneura* Kriechbaumer," and excludes *Grotea* Cresson. The last named genus except in the position of the abdomen is obviously more closely related to *Labena* than to any other Ichneumonid genus. There can be no doubt that the new genus is synonymous with *Apechoneura* Kriechbaumer; the genotype is certainly congeneric with *Apechoneura longicauda* Kriechbaumer, which is represented in the National Collection by a female from Colombia. *Certonotus*

Kriechbaumer is obviously the Australian and Oriental prototype of *Apechoneura*.

In the position of the abdomen *Apechoneura* is more like *Labena*, in fact, in some species at least, is more extreme in this respect than is *Labena*; but in the general form of the body, especially of the abdomen, it is exceedingly like the *Rhyssini*.

The position of the abdomen in *Labena* is subject to an appreciable degree of variation within a species. Five specimens of *Labena grallator* measured with a micrometer showed a variation in the distance of the lower margin of the abdominal foramen above the upper margin of the coxal foramen compared with the dorsal length of the propodeum of from 1 : 3.7 to 1 : 6.2. It should be noted that the Rhyssini have the abdomen inserted somewhat higher than is common among the Ichneimonidae, and it is not especially remarkable that one or more genera should go to the extreme in this respect. The occurrence of such extreme characters as this in two or more groups is not particularly rare. As examples may be cited the toothed hind femora of *Odontomerus* and *Pristomerus*, genera not at all closely related to each other but closely related to other genera without toothed femora; the carapace form of abdomen which occurs in several widely separated places in the Braconidae and Ichneumonidae; the strongly convergent eyes found in widely separated genera of Ichneumonidae; and the wingless and ant like form of the female in the Gelini and in the Stilpinine genera *Thaumatotypus* and *Thaumatotypidea*.

The general shape of the head is perhaps more like that of the Labenini, especially *Grotea*, but the resemblance is largely superficial, for the clypeus and the immargined occiput are Rhyssine and the position of the junction of the occipital and gular carinae is more nearly that of the Rhyssini than that of the Labenini. The tooth on the lower posterior side of the head is not homologous with that of *Grotea*, for while in *Grotea* it is formed at the junction of the two carinae, in *Apechoneura* it is in the area between the carinae.

Apechoneura has the mesoscutum and scutellum distinctly Rhyssine in character, while those sclerites in *Grotea* are very similar to those of *Labena*.

The venation of the wings in *Apechoneura* has some features in common with both the Labenini and the Rhyssini. The form of the areolet is about midway between *Labena* and *Megarhyssa*. According to Morley's key[1] at least one of the species of *Apechoneura* has the discoidella originating almost at the top of nervellus

[1] Rev. Ichn., Part II, 1913, p. 23.

(this is very close to the condition of the Rhyssini) while most of them have it originating far out on the cubitella. In *Labena* and *Grotea* it is not far above the middle of nervellus.

In having the epipleura broad and concealing the sternites *Apechoneura* resembles *Labena* and *Grotea*.

To the writer it seems that the preponderance of the characters allies *Apechoneura* with the Rhyssini and *Grotea* with the Labenini, while the former, by the few characters in which it resembles the Labenini, merely shows the relationship of the two tribes to each other and emphasizes the Ichneumonine affinities of the Labenini, and that the family Labenidae is not well founded.

Genus **Apechoneura** Kriechbaumer.

Apechoneura Kriechbaumer, Ann. k. k. naturh, Hofmus. Wien., Vol. 5, 1890, p. 485.

Psiloparia Viereck, Ent. News, Vol. 31, 1920, p. 17.

The following additional characters of the female are of importance:

Occipital carina curving forward below and joining the gular carina nearly at the base of the mandibles, the space between the carinae armed with a tooth posteriorly; face convexly elevated, above level of eye-margins, coarsely pitted; pronotum with a flange-like carina at about the middle of its upper lateral margin, tegulae oblong; propodeum with only the five basal areas completely defined, the only carinae developed behind the basal being the lateral longitudinal; the true ninth tergite (*i. e.*, counting the propodeum as the first) nearly completely divided medially and prolonged at the sides into long acute lobes, the tenth not completely fused with it but lying between the prolongations of the ninth as a weakly chitinized, trowel-shaped flap. (See Fig. 1 c, d, and e.)

The last character is most curious and not possessed, so far as the writer is aware, by any other Ichneumonid. It furnishes good specific characters.

Apechoneura tricolor, new species.

Closely related to (*Psiloparia*) *Apechoneura maculata* (Viereck), from the description of which it differs principally in color of body and of appendages.

Does not agree with the description of any of the thirteen species tabulated by Morley (loc. cit.).

Female.—Length 16 mm.; antennae 12.5 mm.; ovipositor 15.5 mm.

Head subglobose, the cheeks very broad, tooth between occipital and genal carinae very small and acute; face about as long as wide at top, narrowed

below, densely pitted; elevated above level of orbits; clypeus barely half as long as wide, divided transversely by a sharp carina, truncate at apex, mostly smooth, separated from face by a deep groove which extends laterally and dorsally to the eye margin; sides of frons sculptured like the face; head otherwise polished. Thorax polished; scutellum with a few transverse welts rather than rugose; post-scutellum with a transverse carina; propodeum with the apical carina and the median carinae beyond the basal missing, basal median area concave, wider than long, rounded behind; spiracles slit-like, curved, ditected backward; metapleurum with a distinct triangular tooth just in front of middle coxa; hind coxa with a prominent flange-like projection below at base; areolet narrowly sessile, quadrangular, the second intercubitus forming its longest side; discoidella originating from cubitella nearly midway between nervellus and intercubitella. Abdomen with basal segments polished; apical segments with dense, short, appressed pubescence; first tergite more than three times as long as wide at apex, the spiracles slightly beyond the middle; second tergite shorter than third, hardly twice as long as wide, its sides parallel; third slightly more than twice as long as wide; third to fifth slightly emarginate at apex; sixth not at all emarginate;

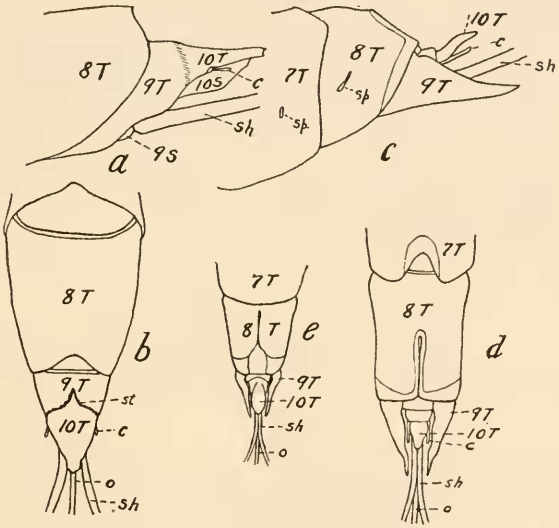

Fig. 1. Apex of abdomen of *Rhyssa* and *Apechoneura*. *a*—Lateral view of *Rhyssa persuasoria* (Linné). *b*—Dorsal view of same. *c*—Lateral view of *Apechoneura longicanda* Kriechbaumer. *d*—Dorsal view of same. *e*—Dorsal view of *Apechoneura tricolor* Cushman. *7T–10T*=Seventh to tenth tergites; *9S*=ninth sternite; *c*=cerci; *o*=ovipositor; *sh*=sheath of ovipositor; *sp*=spiracle; *st*=fused suture between ninth and tenth tergites.

seventh incised nearly to base; eighth tergite (true ninth) with its lateral extensions obtuse at apex and reaching barely beyond the tenth.

Yellow, mahogany red, and black; head yellow with the frons and occiput partly red; apices of mandibles and antennae black, scape red above, blackish within and narrowly yellow at apex, flagellum reddish at base and with a white annulus near apex, thorax yellow with the sutures, a large spot on each side of the mesoscutum confluent before and behind, prepectus ventrally, an irregular spot on mesopleurum, basal areas of propodeum, and a stripe below insertion of abdomen red more or less mixed or margined with black; front and middle legs yellow, their femora largely red behind; front tibia and tarsus beneath, middle tibia behind with an interruption near base and the tarsus except narrow apices of first four joints black; hind coxae red with elongate yellow spots above and below; trochanter yellow with a piceous mark above, second joint entirely piceous; hind femur red, piceous at extreme base, the piceous color followed outside by a fringe of yellow and inside by a distinct yellow spot; hind tibia black with a broad yellow sub-basal annulus, the tarsus black with a white annulus embracing joints 2–4 and apex of the first; tegulae yellow with an apical red spot; wings byaline, apex infumate, venation nearly black; tergites largely red, the red more or less margined with blackish; median longitudinal stripe the whole length of the first tergite, an apical median spot on second, V-shaped marks, on third and fourth, oblique lateral marks on fifth, apical lateral marks on sixth and seventh, and the ventral margins of sixth to eighth yellow; tergites 3 to 7 with median apical blackish spots; epipleura yellow with longitudinal blackish marks on second to fifth; ovipositor sheath with a subapical white annulus.

Type locality.—San Bernardino, Paraguay.

Type.—Cat. No. 22817, U. S. N. M.

One specimen collected by K. Fiebrig.

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